



SEQUENCE LISTING

<110> MACHIDA, Masayuki  
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KUNIHIRO, Sumiko  
HAGIWARA, Hiroko

<120> MARKER FOR SELECTING TRANSFORMANT WITH THE USE OF LETHAL GENE

<130> 040894-7170-US

<140> US 10/522,366  
<141> 2005-01-25

<150> PCT/JP03/09543  
<151> 2003-07-28

<150> JP 2002-218735  
<151> 2002-07-26

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<170> PatentIn version 3.4

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28

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57

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cagaatggtg gtggaaaacg caagcgctgg actggagata aagggcgtaa gatttatgag	180
tgggattctc agcatggtga gcttgagggg tatcgtgcc a gtgatggtca gcatcttggc	240
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tcagttatgg aaagtctagg tgtgccttt aaggataatg ttaataacgg ttgccttgat 480  
gttatacgctg aatgggtacc ttgctacaa ccatacttta atcatcaa atgatattcc 540  
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<211> 607

<212> DNA

<213> Escherichia coli

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acacccaaagc agaatggtgg tggaaaacgc aagcgctgga ctggagataa agggcgtaag 180

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gatatttccg ataatgagta ttttgggtt tttgattttc gtgtatggta ttgggtgagaa 600

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<212> DNA

<213> Escherichia coli

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aaggataatg ttaataacgg ttgcgttgc gttatagctg aatgggtacc tttgctacaa	180
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cgtgatggtg attggtga	258

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<212> PRT  
<213> Escherichia coli

<400> 17

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Ser Gly Asn Ile Asn Gly Gly Pro Thr Gly Leu Gly Val Gly Gly Gly  
20 25 30

Ala Ser Asp Gly Ser Gly Trp Ser Ser Glu Asn Asn Pro Trp Gly Gly  
35 40 45

Gly Ser Gly Ser Gly Ile His Trp Gly Gly Ser Gly His Gly Asn  
50 55 60

Gly Gly Gly Asn Gly Asn Ser Gly Gly Ser Gly Thr Gly Gly Asn  
65 70 75 80

Leu Ser Ala Val Ala Ala Pro Val Ala Phe Gly Phe Pro Ala Leu Ser  
85 90 95

Thr Pro Gly Ala Gly Gly Leu Ala Val Ser Ile Ser Ala Gly Ala Leu  
100 105 110

Ser Ala Ala Ile Ala Asp Ile Met Ala Ala Leu Lys Gly Pro Phe Lys  
115 120 125

Phe Gly Leu Trp Gly Val Ala Leu Tyr Gly Val Leu Pro Ser Gln Ile  
130 135 140

Ala Lys Asp Asp Pro Asn Met Met Ser Lys Ile Val Thr Ser Leu Pro  
145 150 155 160

Ala Asp Asp Ile Thr Glu Ser Pro Val Ser Ser Leu Pro Leu Asp Lys  
165 170 175

Ala Thr Val Asn Val Asn Val Arg Val Val Asp Asp Val Lys Asp Glu  
180 185 190

Arg Gln Asn Ile Ser Val Val Ser Gly Val Pro Met Ser Val Pro Val  
195 200 205

Val Asp Ala Lys Pro Thr Glu Arg Pro Gly Val Phe Thr Ala Ser Ile  
210 215 220

Pro Gly Ala Pro Val Leu Asn Ile Ser Val Asn Asn Ser Thr Pro Ala  
225 230 235 240

Val Gln Thr Leu Ser Pro Gly Val Thr Asn Asn Thr Asp Lys Asp Val  
245 250 255

Arg Pro Ala Gly Phe Thr Gln Gly Gly Asn Thr Arg Asp Ala Val Ile  
260 265 270

Arg Phe Pro Lys Asp Ser Gly His Asn Ala Val Tyr Val Ser Val Ser  
275 280 285

Asp Val Leu Ser Pro Asp Gln Val Lys Gln Arg Gln Asp Glu Glu Asn  
290 295 300

Arg Arg Gln Gln Glu Trp Asp Ala Thr His Pro Val Glu Ala Ala Glu  
305 310 315 320

Arg Asn Tyr Glu Arg Ala Arg Ala Glu Leu Asn Gln Ala Asn Glu Asp  
325 330 335

Val Ala Arg Asn Gln Glu Arg Gln Ala Lys Ala Val Gln Val Tyr Asn  
340 345 350

Ser Arg Lys Ser Glu Leu Asp Ala Ala Asn Lys Thr Leu Ala Asp Ala  
355 360 365

Ile Ala Glu Ile Lys Gln Phe Asn Arg Phe Ala His Asp Pro Met Ala  
370 375 380

Gly Gly His Arg Met Trp Gln Met Ala Gly Leu Lys Ala Gln Arg Ala  
385 390 395 400

Gln Thr Asp Val Asn Asn Lys Gln Ala Ala Phe Asp Ala Ala Ala Lys  
405 410 415

Glu Lys Ser Asp Ala Asp Ala Ala Leu Ser Ser Ala Met Glu Ser Arg  
420 425 430

Lys Lys Glu Asp Lys Lys Arg Ser Ala Glu Asn Asn Leu Asn Asp  
435 440 445

Glu Lys Asn Lys Pro Arg Lys Gly Phe Lys Asp Tyr Gly His Asp Tyr  
450 455 460

His Pro Ala Pro Lys Thr Glu Asn Ile Lys Gly Leu Gly Asp Leu Lys  
465 470 475 480

Pro Gly Ile Pro Lys Thr Pro Lys Gln Asn Gly Gly Lys Arg Lys  
485 490 495

Arg Trp Thr Gly Asp Lys Gly Arg Lys Ile Tyr Glu Trp Asp Ser Gln  
500 505 510

His Gly Glu Leu Glu Gly Tyr Arg Ala Ser Asp Gly Gln His Leu Gly  
515 520 525

Ser Phe Asp Pro Lys Thr Gly Asn Gln Leu Lys Gly Pro Asp Pro Lys  
530 535 540

Arg Asn Ile Lys Lys Tyr Leu  
545 550

<210> 18  
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<212> PRT  
<213> Escherichia coli

<400> 18

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20 25 30

Lys Gly Leu Gly Asp Leu Lys Pro Gly Ile Pro Lys Thr Pro Lys Gln  
35 40 45

Asn Gly Gly Gly Lys Arg Lys Arg Trp Thr Gly Asp Lys Gly Arg Lys  
50 55 60

Ile Tyr Glu Trp Asp Ser Gln His Gly Glu Leu Glu Gly Tyr Arg Ala  
65 70 75 80

Ser Asp Gly Gln His Leu Gly Ser Phe Asp Pro Lys Thr Gly Asn Gln  
85 90 95

Leu Lys Gly Pro Asp Pro Lys Arg Asn Ile Lys Lys Tyr Leu  
100 105 110

<210> 19

<211> 97

<212> PRT

<213> Escherichia coli

<400> 19

Lys Gly Phe Lys Asp Tyr Gly His Asp Tyr His Pro Ala Pro Lys Thr  
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Glu Asn Ile Lys Gly Leu Gly Asp Leu Lys Pro Gly Ile Pro Lys Thr  
20 25 30

Pro Lys Gln Asn Gly Gly Lys Arg Lys Arg Trp Thr Gly Asp Lys  
35 40 45

Gly Arg Lys Ile Tyr Glu Trp Asp Ser Gln His Gly Glu Leu Glu Gly  
50 55 60

Tyr Arg Ala Ser Asp Gly Gln His Leu Gly Ser Phe Asp Pro Lys Thr  
65 70 75 80

Gly Asn Gln Leu Lys Gly Pro Asp Pro Lys Arg Asn Ile Lys Lys Tyr  
85 90 95

Leu

<210> 20

<211> 330

<212> DNA

<213> Escherichia coli

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caaaggcagaa tggtggtgga aaacgcaagc gctggactgg agataaaggcg cgtaaagattt 180  
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<220>  
<223> Synthetic single-stranded oligonucleotide

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<210> 22  
<211> 60  
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<213> Artificial sequence

<220>  
<223> Synthetic single-stranded oligonucleotide

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<210> 23  
<211> 650  
<212> DNA  
<213> *Saccharomyces cerevisiae*

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ctctaacatt gagacagcat agaataagtg cgacatcatc atcggaaagag agtagtaaca	420
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<212> DNA  
<213> *Aspergillus oryzae*

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